



CARBON FIBER FABRIC 4X4 TWILL 3K TORAY T300 MODEL #: F-600

TORAYCA® T300

Baseline carbon fiber used in aerospace applications. Has 30 year production history and is known for its balanced composite properties, high quality, consistency, reliability and supplyability.



FUNCTIONAL PROPERTIES

CTE	-0.41 $\alpha \cdot 10^{-6} / ^\circ\text{C}$	
Specific Heat	0.19 Cal/g $\cdot^\circ\text{C}$	
Thermal Conductivity	0.025 Cal/cm $\cdot\text{s}\cdot^\circ\text{C}$	
Electric Resistivity	$1.7 \times 10^{-3} \Omega \cdot \text{cm}$	
Chemical Composition:	Carbon Na + K	93% <50 ppm

FIBER PROPERTIES

		English	Metric	Test Method
Tensile Strength		512 ksi	3530 MPa	TY-030B-01
Tensile Modulus		33.4 Msi	230GPa	TY-030B-01
Strain		1.5%	1.5%	TY-030B-01
Density		0.064 lbs/in ³	1.76 g/cm ³	TY-030B-02
Filament Diameter		2.8E - 04 in.	7 μm	
Yield	1K 3K 6K 12K	22568 ft/lbs 7523 ft/lbs 3761 ft/lbs 1862 ft/lbs	66 g/1000m 198 g/1000m 396 g/1000m 800 g/1000m	TY-030B-03
Sizing Type & Amount	40A, 40B 40D 50A, 50B	1.0% 0.7% 1.0%		TY-030B-05
Twist	Twisted, Untwisted, or Never Twisted			



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COMPOSITE PROPERTIES*

	English	Metric	Test Method
Tensile Strength	270 ksi	1860 MPa	ASTM D-3039
Tensile Modulus	20.0 Msi	135 GPa	ASTM D-3039
Tensile Strain	1.3%	1.3%	ASTM D-3039
Compressive Strength	215 ksi	1470 MPa	ASTM D-695
Flexural Strength	260 ksi	1810 MPa	ASTM D-790
Flexural Modulus	18.0 Msi	125 GPa	ASTM D-790
ILSS	14 ksi	10 kfg/mm ²	ASTM D-2344
90° Tensile Strength	11.0 ksi	76 MPa	ASTM D-3039

* Toray 250°F Epoxy Resin. Normalized to 60% fiber volume.

COMPOSITE PROPERTIES**

	English	Metric	Test Method
Tensile Strength	255 ksi	1760 MPa	ASTM D-3039
Tensile Modulus	19.5 Msi	130 GPa	ASTM D-3039
Tensile Strain	1.3%	1.3%	ASTM D-3039
Compressive Strength	230 ksi	1570 MPa	ASTM D-695
Compressive Modulus	18.5 ksi	125 GPa	ASTM D-695
In-Plane Shear Strength	14 Msi	98 MPa	ASTM D-3518
ILSS	15.5 ksi	11 kfg/mm ²	ASTM D-2344
90° Tensile Strength	11.5 ksi	80 MPa	ASTM D-3039

** Toray Semi-Toughened 350°F Epoxy Resin. Normalized to 60% fiber volume.

Information and data included in this data sheet is considered to be accurate and reliable to the best of our knowledge however it is not guaranteed to be so. It is the user/buyer's responsibility to determine for themselves the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. Composite Envisions make no representations or warranties as to the results to be obtained in using any material. As Composite Envisions cannot foresee all conditions under which products will be used, user/buyer waives any claim against Composite Envisions for direct, indirect, consequential, or exemplary damages including without limitation, damage which may incur as a result of user/buyer's use or misuse of the product or the product's failure to perform to any expected performance level.

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